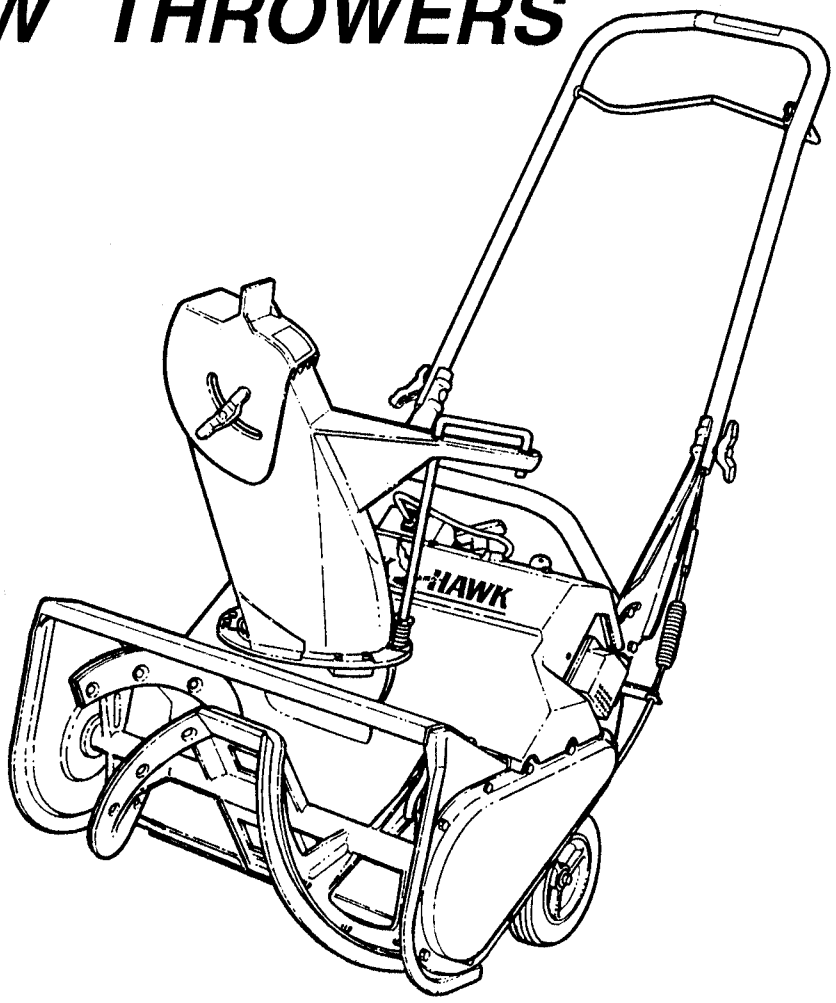
Safety Instructions & Operator's Manual for

BLACK HAWK™ By Snapper

MODELS BH3203 & BH3203E SNOW THROWERS



*Thank you for buying a **BLACKHAWK** product! Before operating your Snow Thrower, read and follow the Important Safety Instructions (on Page 2), the other instructions contained in this manual and the accompanying booklet, "About Snow Thrower Safety". Snow Throwers, and all power equipment, can be potentially dangerous if improperly used. REMEMBER: SAFETY REQUIRES CAREFUL USE IN ACCORDANCE WITH INSTRUCTIONS AND COMMON SENSE.*

BLACK HAWK™ By Snapper

MANUAL No. TP2-7438 (REV. 1, 5/96)

IMPORTANT SAFETY INSTRUCTIONS

WARNING: This powerful machine is capable of amputating hands and feet and can throw objects that can cause injury and damage! Failure to comply with the following instructions may result in serious injury to the operator or other persons. The owner of the snow thrower must understand these instructions and, furthermore, must allow only persons who understand these instructions to operate snow thrower. Each person operating the snow thrower must be of sound mind and body and must not be under the influence of any substance which might impair vision, dexterity, or judgment. If you have any questions pertaining to your snow thrower which your dealer cannot answer to your satisfaction, call or write the Customer Service Department at SNAPPER, McDonough, Georgia 30253. Phone: (770) 954-2500.

PROTECTION FOR CHILDREN

1. DO NOT allow children in the area when snow thrower is being operated.
2. DO NOT allow pre-teenage children to operate snow thrower.
3. DO NOT allow irresponsible teenagers to operate the machine - allow teenagers only if exhibiting mature judgment and then only after being thoroughly instructed and under the close supervision of an experienced operator.
4. Keep the area clear of all persons, particularly small children and pets
5. Know how to STOP the snow thrower and disengage the controls quickly.

PREPARATION

1. Read this manual, get to know where all controls are located and practice how to use them before starting for the first time, and at the beginning of each season. Pay attention to Warning and Instructional Decals on engine and snow thrower.
2. Wear adequate winter clothing including boots which will give you maximum footing on slippery surfaces. Exercise CAUTION to avoid slipping or falling.
3. Before the first snow fall, check the area to be cleared and remove all objects such as doormats, sticks, toys, wires, rocks, etc., which could be hurled or jam the snow thrower.
4. Survey the area to be cleared beforehand and plan where snow is to be blown. Be prepared to release auger/impeller clutch or to change discharge chute direction quickly to discharge away from windows, cars, buildings and doorways to avoid property damage or personal injury from hurled objects.
5. Handle fuel with care. Store only in an approved fuel container. Move the machine outdoors where fumes can be safely dissipated before filling fuel tank. Never add fuel to a running engine or hot engine. Replace fuel cap securely and wipe up spilled fuel.

OPERATIONAL PRECAUTIONS

1. Before starting, make visual check to make sure auger/impeller housing is clear and all guards and shields are in place and tight.
2. Warn everyone in advance to stay clear of area but keep especially watchful for children and pets darting into area while operating.

OPERATIONAL PRECAUTIONS

3. Start engine only where exhaust fumes will be safely dissipated, allow a brief warm-up period, practice operation of controls outside before putting the machine to work.
4. Should the auger/impeller become clogged, release the auger/impeller clutch control and, as an additional precaution, STOP the engine before attempting to unclog the auger/impeller or discharge chute.
5. After striking a foreign object, STOP the engine (motor), remove the wire from spark plug, thoroughly inspect the snow thrower for any damage, and repair the damage before restarting and operating the snow thrower.
6. STOP the engine if the machine starts to vibrate excessively as this normally indicates mechanical problems. Disconnect the spark plug wire to prevent unintentional starting before servicing or repairing the machine.
7. DO NOT clear snow across the face of slopes. Exercise extreme CAUTION when changing direction on slopes. DO NOT attempt to clear steep slopes.
8. STOP the engine and remove the key whenever you leave the unit unattended to eliminate the possibility of children or untrained adults from attempting to operate the machine.
9. Release clutch control and make sure auger/impeller has STOPPED before rotating discharge chute, adjusting deflector, or placing hands near auger/impeller.
10. DO NOT use snow thrower on surfaces above ground level, such as, a roof of a building.
11. Exercise extreme CAUTION when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
12. DO NOT overload the machine capacity by attempting to clear snow at too fast a rate.
13. Never operate the machine at high transport speeds on slippery surfaces. Look behind and use care when backing.
14 Disengage power to the auger/impeller when snow thrower is transported or not in use.
15. Use only attachments and accessories approved by the manufacturer of the snow thrower (such as wheels weights, counterweights, cabs and the like).
16. Never operate the snow thrower without good visibility or light. Always be sure of your footing, and keep a firm hold on the handles. Walk; never run.

OPERATING INSTRUCTIONS

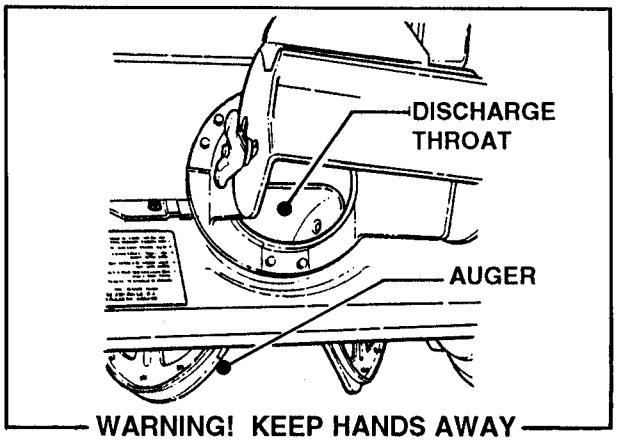
PRE-MIX FUEL (32 to 1 RATIO)

For proper lubrication, the engine must operate on an exact mixture of gasoline and 2-cycle air-cooled engine oil. Use a 32 to 1 mixture. Use a good quality unleaded gasoline and 2-cycle engine oil. **DO NOT** use the special 50:1 ratio oils. The 32 to 1 ratio equals 4 ounces of oil to each gallon (U.S. Standard of gasoline, (or 16 oz. to 4 gallons of gasoline). Refer to the following chart for correct 32 to 1 ratio mixtures:

Pre-Mix the fuel in an approved container while observing **ALL** safety precautions relating to handling of fuel. Add some gasoline to the container first, then the oil. Close the container and shake vigorously to thoroughly mix the fuel; open the container and add the remaining amount of gasoline to correct the ratio. Shake the container to mix the fuel each time before filling the blower fuel tank. **DO NOT** add fuel to unit while hot...allow engine to cool.

32:1 RATIO - U.S. STANDARD FLUID MEASUREMENTS

GALLONS GASOLINE	1	2	3	4	5
OUNCES 2-CYCLE OIL	4	8	12	16	20



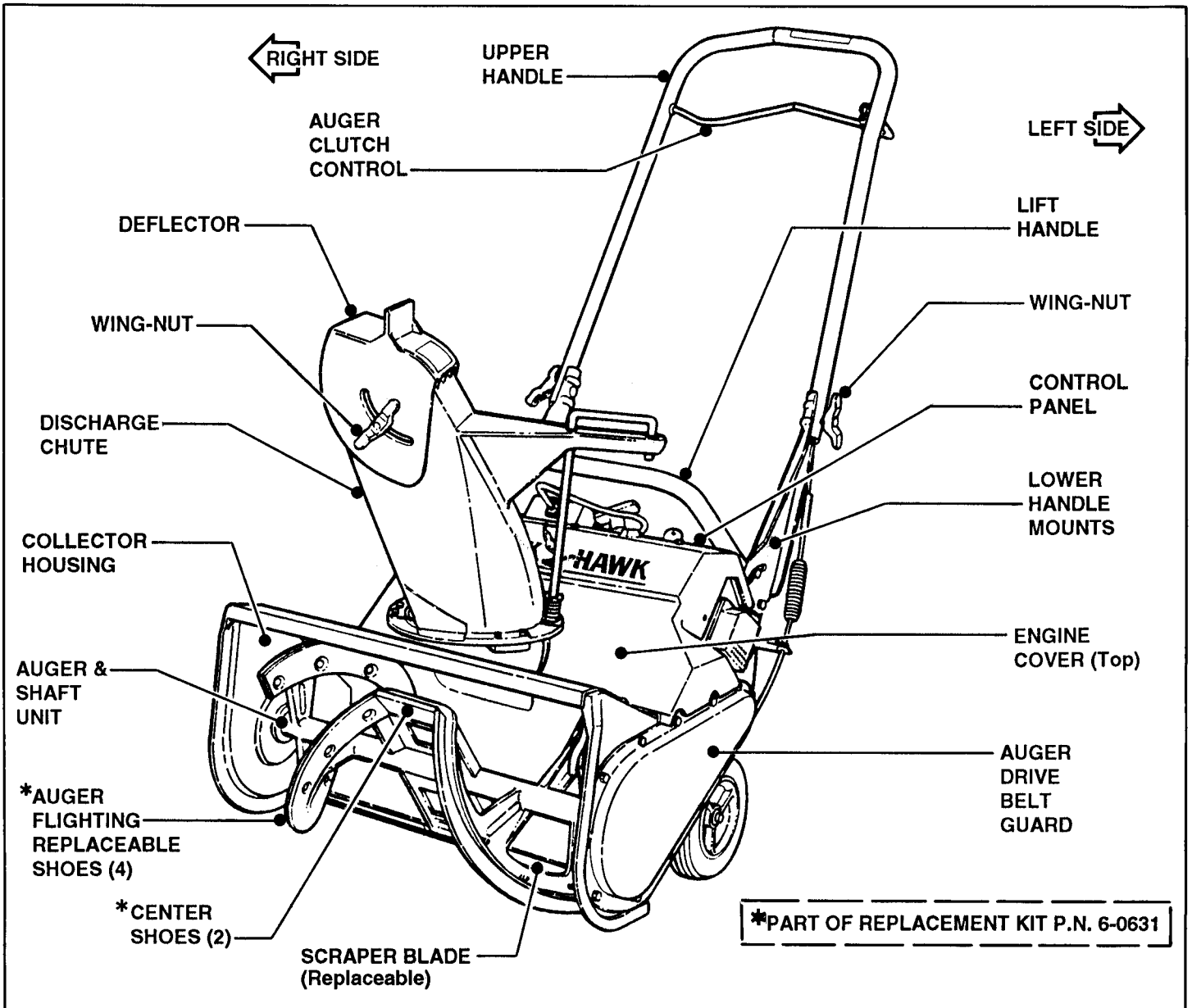


FIGURE 1: LOCATION OF CONTROLS & FEATURES (Front View)

OPERATION (Continued)

The BLACKHAWK Model BH3203 and BH3203E is powered by a 3HP 2-cycle engine which requires an exact mixture of oil and gasoline to provide internal lubrication of the engine.

Refer to the Engine Owner's Manual which accompanies your unit for the specific fuel ratio and other important details.

Save these manuals and review at the start of each new season. Pay particular attention to the Important Safety Instructions and to the warning decals on the unit.

Know how to stop the auger and engine quickly in preparation for possible emergencies! The auger is stopped by releasing the auger clutch control and the engine is stopped by turning the key in ignition to **OFF** position.

PRE-START CHECKS

- FUEL SUPPLY: After making sure unit is safely away from ignition-producing appliances, and in a well ventilated area where gasoline fumes can be dissapated, fill the fuel tank with correct gasoline/oil mixture as specified in the Engine Owner's Manual.

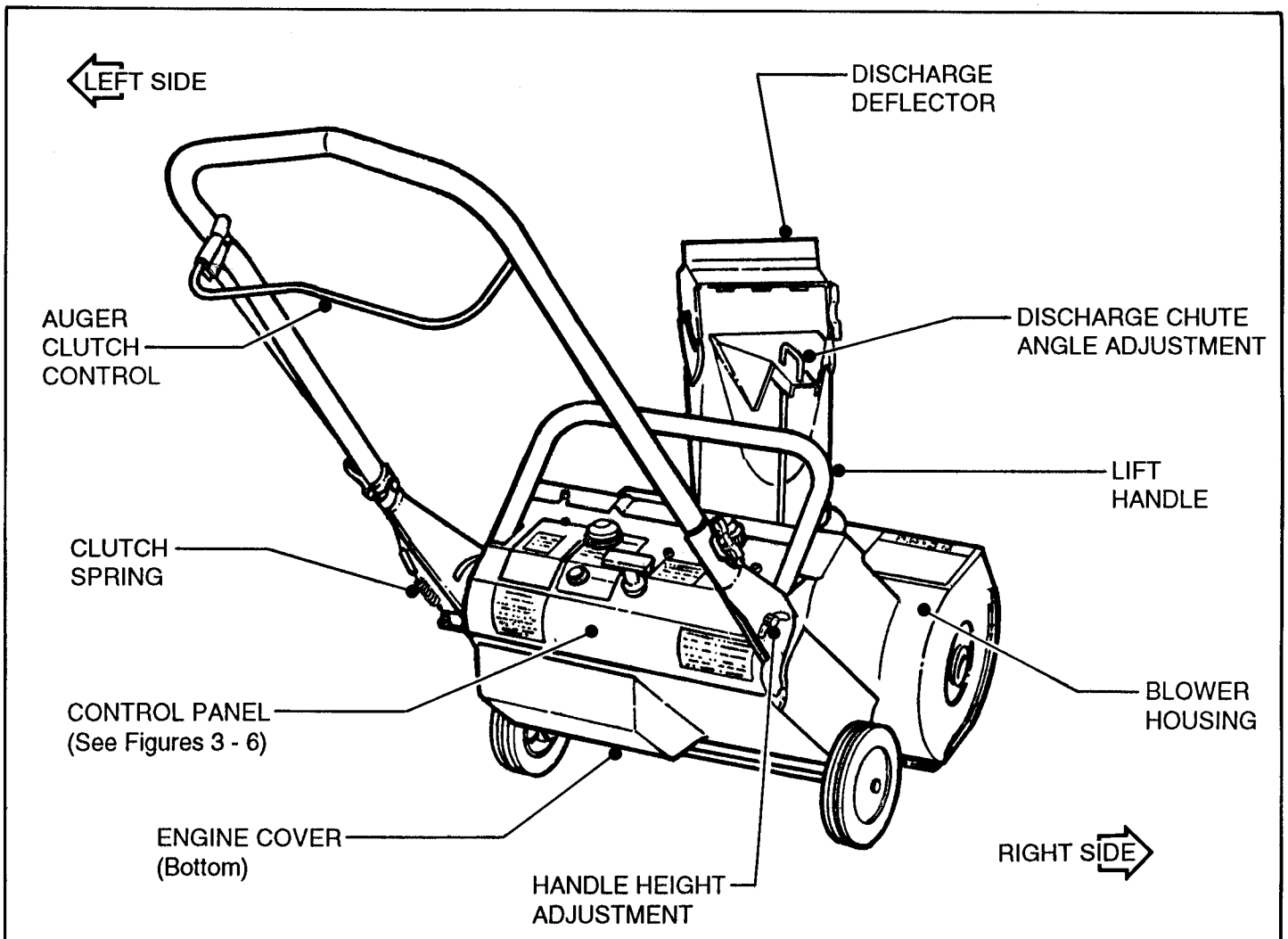


FIGURE 2: LOCATION OF CONTROLS & FEATURES (Rear View)

The 3203 model will clear a path approximately twenty inches wide and will throw the snow from 3 to 18 feet away depending on the setting of the discharge deflector and conditions of the snow. The light weight of the unit allows easy lifting for sweeping steps and porches. The one quart capacity tank holds sufficient fuel for one to one and a half hours of operation depending upon load conditions.

- CHECK GUARDS & COVERS to make sure all are in position and securely tightened.

- CHECK AUGER CLUTCH to make sure control operates freely without binding.

- CHECK BLOWER HOUSING to make sure it is completely free of rags, toys or other objects which could be thrown or block operation of the auger.

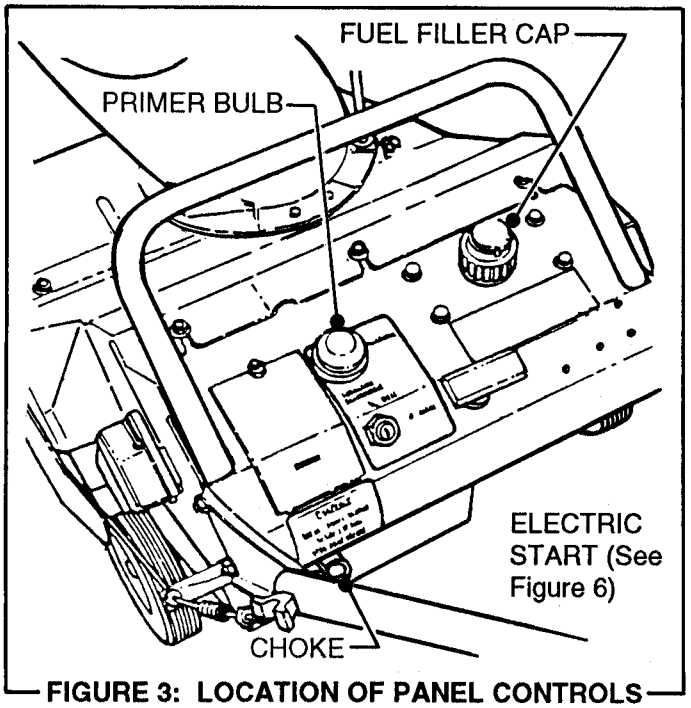


FIGURE 3: LOCATION OF PANEL CONTROLS

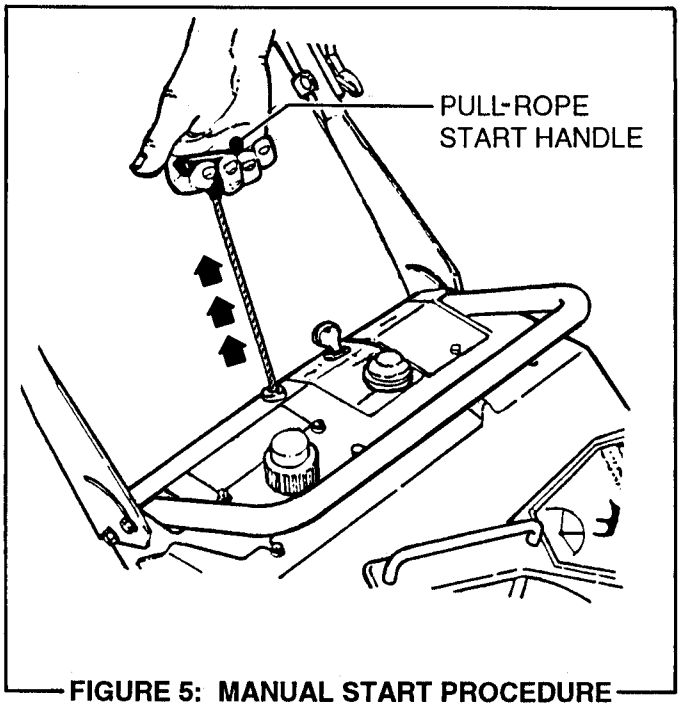


FIGURE 5: MANUAL START PROCEDURE

START - STOP PROCEDURE

STARTING - STOPPING ENGINE: The engine is stopped by turning the ignition key to **OFF.** Always remove the key from the switch when leaving the machine. Start the engine as follows after performing the foregoing pre-start checks and services.

1. PRIME engine as instructed in the Engine Owner's Manual.

2. CHOKE by pulling choke control out.

3. IGNITION: turn engine ignition key to **ON.**

4. ROPE START: Pull starter handle with smooth rapid movement until engine starts. If engine fires but does not start after repeated attempts, push choke control in and pull starter handle again. **DO NOT** allow handle to snap back.

5. ELECTRIC START (Option): Connect power cord to starter switch box on panel, then plug the other end into a 120 volt AC receptacle. Push starter button in until engine starts. **DO NOT** hold starter button for more than twenty seconds to avoid damaging starting motor. After engine starts, disconnect power cord from the AC receptacle first, then unplug from the switch box on the snow thrower.

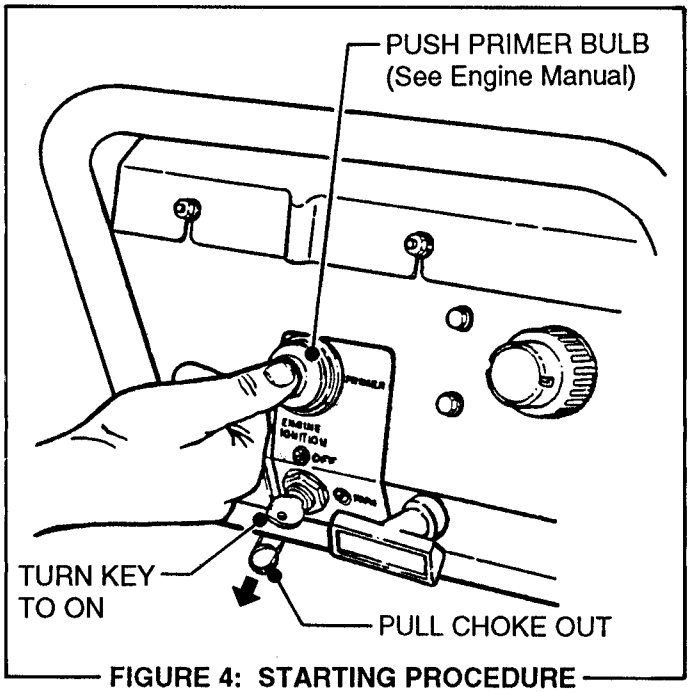


FIGURE 4: STARTING PROCEDURE

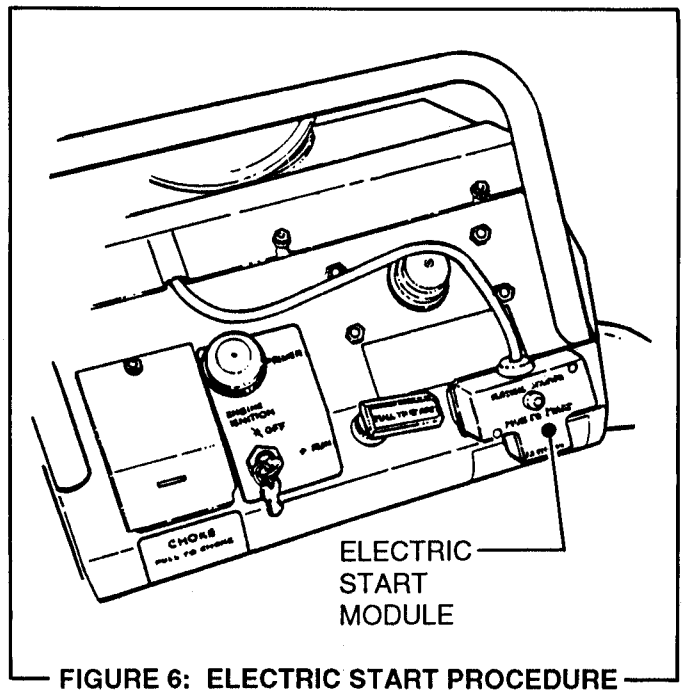


FIGURE 6: ELECTRIC START PROCEDURE

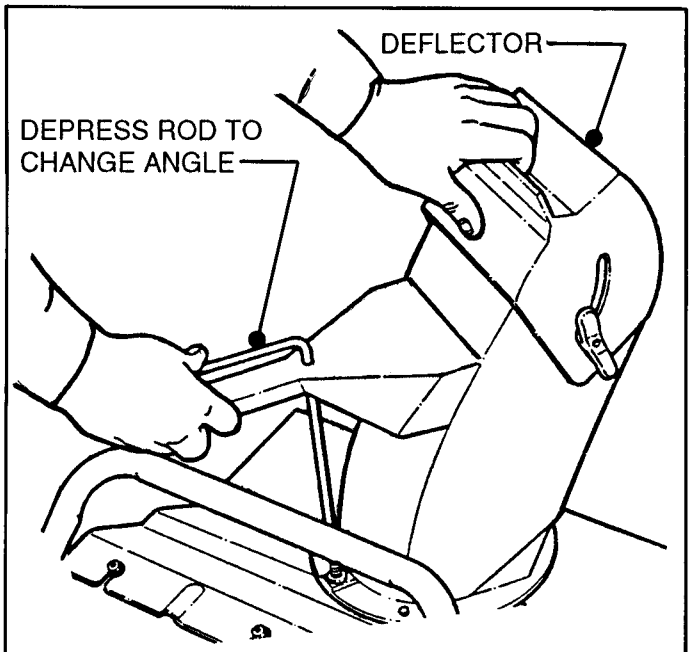


FIGURE 7: DISCHARGE ADJUSTMENTS

OPERATIONAL HINTS

After the engine has warmed sufficiently, **START** the augers by pulling the auger clutch control back to the handle. Release the control to **STOP** the augers.

The rubber strips attached to the edges of the augers help pull the Snow Thrower forward. Push down on the handles to raise the strips above the surface to **STOP** forward motion. In especially heavy snow, moving the Snow Thrower back and forth may help clear the first path. Overlap as needed to suit snow conditions.

FIGURE 8: STOP BEFORE ADJUSTING CHUTE

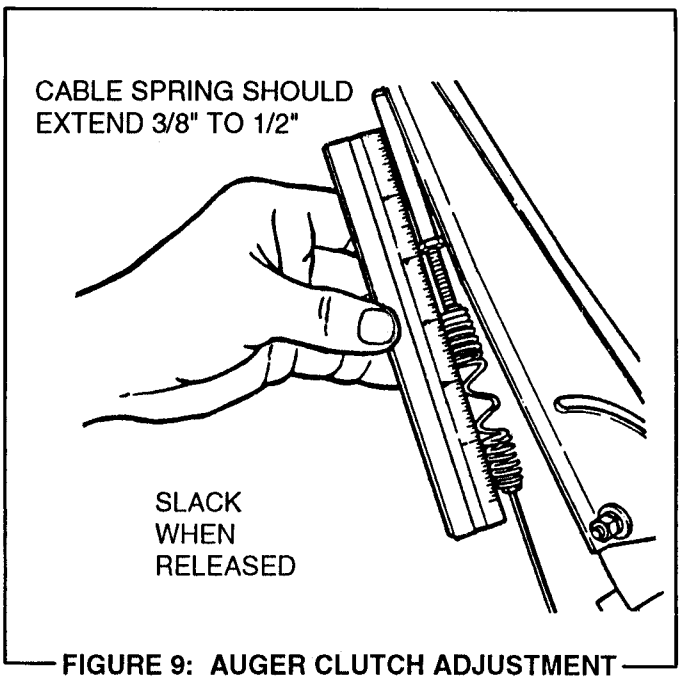


FIGURE 9: AUGER CLUTCH ADJUSTMENT

SERVICE PROCEDURE

Contact your BLACKHAWK Dealer for service assistance and/or replacement parts for your Snow Thrower. Contact the engine dealer for engine service.

AUGER CLUTCH ADJUSTMENT: Pull the clutch control up against the handle and **note** the cable. If the cable is slack with the control held against the handle, release the control, loosen the nut and increase the tension by turning the cable or turn buckle on lower end. Proper idler tension is achieved when cable spring is extended 3/8" to 1/2" when clutch control is held against handle. Release clutch control and **note** cable. The cable should be slack with control released.

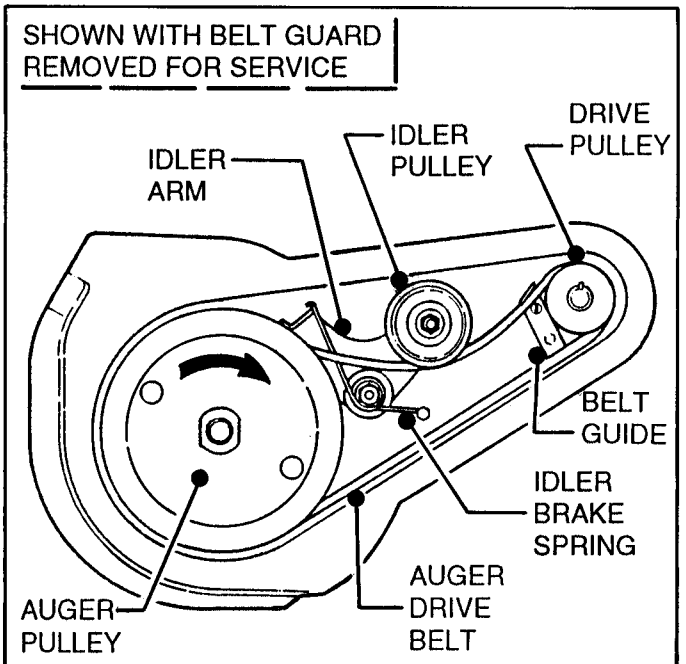


FIGURE 10: AUGER DRIVE ARRANGEMENT

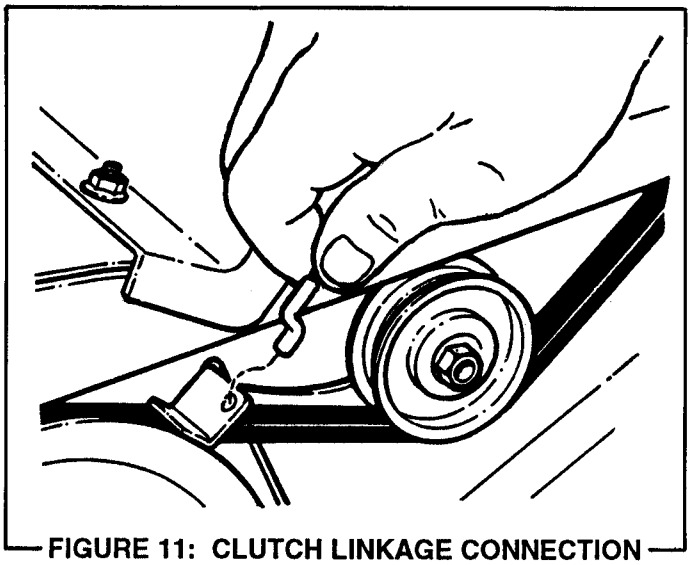


FIGURE 11: CLUTCH LINKAGE CONNECTION

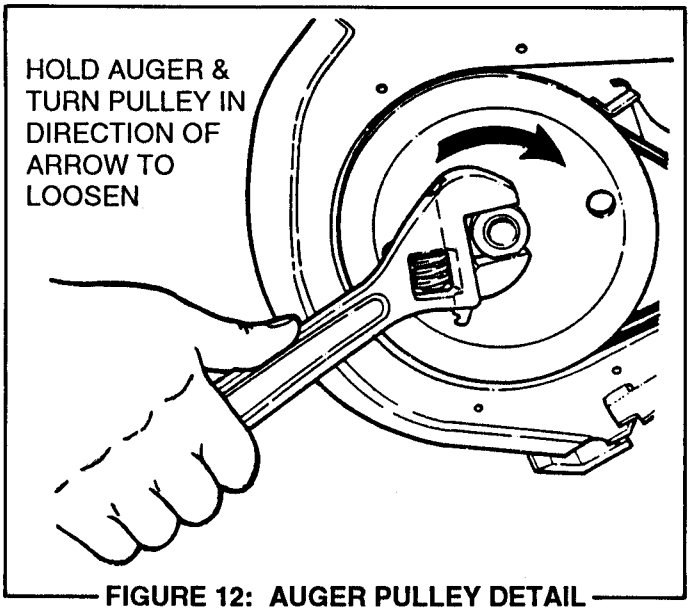


FIGURE 12: AUGER PULLEY DETAIL

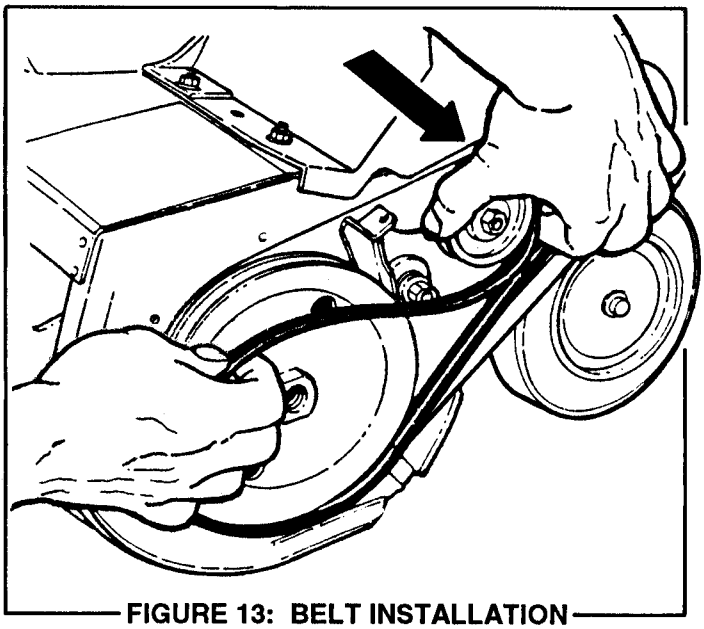


FIGURE 13: BELT INSTALLATION

SERVICE PROCEDURE (Continued)

If auger does not clutch properly with bail released after above adjustment, it may be necessary to adjust belt fingers inside belt drive housing. Remove cover by removing #10 fasteners. Belt fingers are at upper end near engine pulley. With bail drawn up to handle, belt should clear lower finger by 1/16". If adjustment is necessary, loosen belt finger screws and slide up or down as required. Further adjustment is achieved by bending fingers. NOTE complete clutching action: Idler releases, brake is applied and belt comes free of driver.

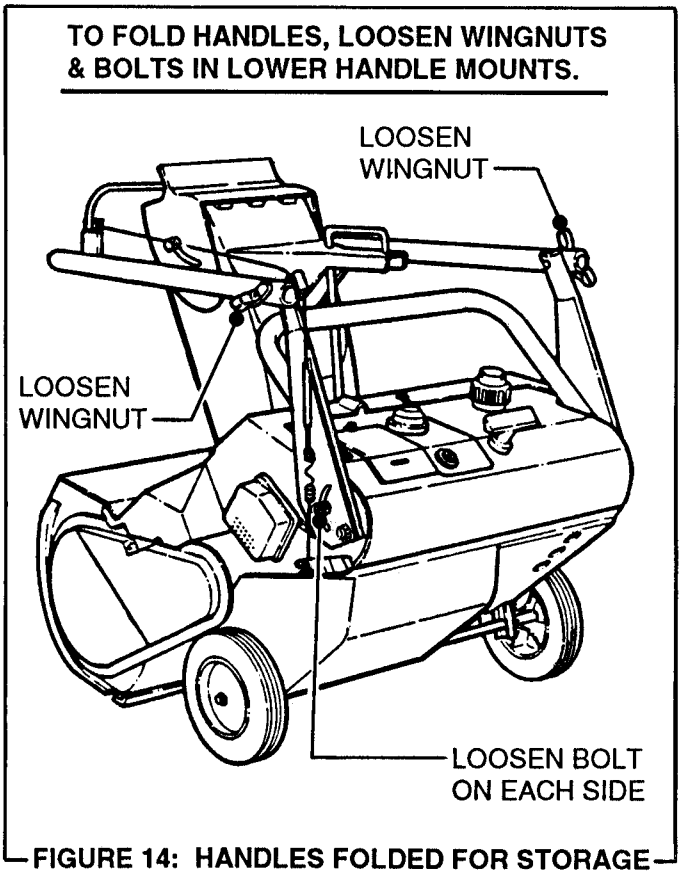


FIGURE 14: HANDLES FOLDED FOR STORAGE

BELT REPLACEMENT: Should the belt need replacement, remove the belt guard, loosen the large 6" auger pulley just enough to slip the old belt off and the new belt on, then retighten after routing the belt over the pulleys. NOTE: The auger pulley is loosened by turning clockwise and tightened by turning counter-clockwise which is the opposite of normal direction. Reinstall the belt cover. Check and readjust clutch cable tension as needed after operating for a few hours as the new belt may stretch or wear in. Use **BLACKHAWK** Belt part number 1-4637.

STORAGE - OFF SEASON

Before storing the unit for the off season, operate the engine until it runs out of fuel. If this is not done, oil in the gasoline will gather in the carburetor making starting very difficult at the beginning of the next season. Refer to the engine owner's manual for specific storage instructions. Cover the unit and store in clean, dry area.

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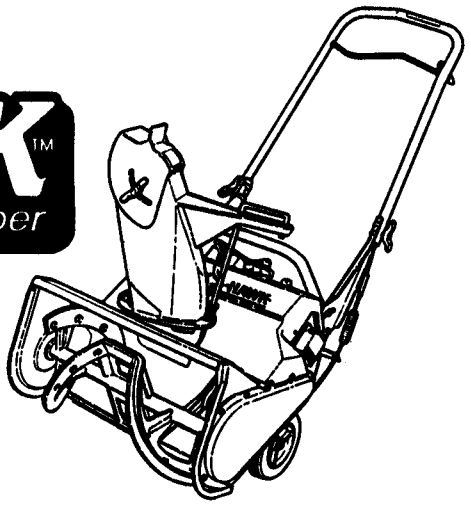

SNAPPER.

2 YEAR LIMITED WARRANTY

For **two (2) years** from purchase date for the original purchaser's **residential**, non-commercial use, **SNAPPER**, through any **SNAPPER** dealer will replace, free of charge (except for taxes where applicable), any part or parts found upon examination by the factory at McDonough, Georgia, to be defective in material or workmanship or both.

For **ninety (90) days** from purchase date for the original purchaser's **commercial**, rental, or other non-residential use, **SNAPPER**, through any **SNAPPER** dealer will replace, free of charge, any part or parts found upon examination by the factory at McDonough, Georgia, to be defective in material or workmanship or both.

All transportation costs incurred by the purchaser in submitting material to a **SNAPPER** dealer for replacement under this warranty must be paid by the purchaser.

This warranty does not apply to engines and their components, hydro transmissions, gear drive transmissions and batteries, as these items are warranted separately. This warranty does not apply to parts that have been damaged by accident, alteration, abuse, improper lubrication, normal wear, or other cause beyond our control.

There is no other express warranty.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to two (2) years from purchase date for the original purchaser's residential, non-commercial use [ninety (90) days from purchase for the original purchaser's commercial, rental or other non-residential use], and to the extent permitted by law, any and all implied warranties are excluded. This is the exclusive remedy. Liabilities for consequential damages, under any and all warranties are excluded.

Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WARNING: THE USE OF REPLACEMENT PARTS OTHER THAN GENUINE SNAPPER PARTS MAY IMPAIR THE SAFETY OF SNAPPER PRODUCTS AND WILL VOID ANY LIABILITY AND WARRANTY BY SNAPPER ASSOCIATED WITH THE USE OF SUCH PARTS.

IMPORTANT: Please fill out the attached **SNAPPER** Product Registration Card immediately and mail to: SNAPPER, McDONOUGH, GEORGIA 30253

⚠WARNING: The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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